Examining Teachers’ Perceptions About and Integration of Technology within Literacy Instruction

A Report Prepared by the Studies and Research Committee of the Massachusetts Reading Association

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Running Head: Examining Perceptions About Technology Integration
Introduction

The rapid development of sophisticated technologies for the classroom has influenced teaching and learning in the 21st century classroom in important ways. For example, today’s teachers have ready access to digital apps and texts via the iPad or tablet, tools that were unimaginable even a decade ago (Hutchison, Beschorner, & Schmidt-Crawford, 2012). As access to affordable and innovative digital tools increases, literacy researchers and leaders in the field have become interested in the ways that digital technologies influence reading, writing, and learning (Baker, Pearson, & Rozendal, 2010; Coiro, 2003; 2011; Coiro & Dobler, 2007; Coiro, Knobel, Lankshear, & Leu, 2008; Dalton & Proctor, 2008; Leu et al., 2004). For example, International Reading Association (2009) and NCTE (2013) have looked closely at the role of technology. They argue that in order to participate in higher education and 21st century workplaces, students must be prepared to use sophisticated digital technologies for a variety of purposes. In addition, the Common Core State Standards Initiative (CCSSI, 2010) calls on teachers to prepare students to use digital tools and texts for reading, writing, information gathering, and learning, thus reflecting the growing understanding that attention to students’ digital literacies is critical in today’s literacy classroom. When one considers the deictic nature of technology and new literacies (Leu, Kinzer, Coiro, & Cammack, 2004), the challenges related to technology integration are apparent.

According to Prensky (2005), today’s students are digital natives who have grown up with ready access to technology; they are immersed technology and are able to use Information and Communications Technology (ICT) for a variety of purposes. One need only stand outside any place where young people gather to appreciate the centrality of technology in their lives. Therefore, many teachers assume that students have the skills needed to use technology effectively in the classroom. However, some suggest that young technophiles need support and instruction in order to use digital tools effectively for reading, writing, and learning (Karchmer-Klein and Shinas, 2012).

Purpose of the Study

In order to prepare students to use 21st century tools effectively, teachers must themselves be proficient users of digital tools and technologies, know how to integrate technology within pedagogically-sound literacy instruction, and have both time and access that allows them to provide students with many authentic opportunities to read digital texts and use digital tools in authentic ways (Hutchison & Reinking, 2011). However, research suggests that most teachers do not integrate technology at high levels (Karchmer, 2001; Lawless & Pellegrino, 2007; Hutchison & Reinking, 2011). With this in mind, the purpose of this study was to examine literacy educators’ perceptions about and use of technology in the literacy classroom.
Members of the Massachusetts Reading Association (MRA) who taught in K-12 classrooms were invited to complete a modified version of a validated survey developed by Hutchison and Reinking (2011; see Appendix), *The Survey Of Technology Use In Literacy And Language Arts*. Our aim was to examine teachers’ reports of technology integration, their perceptions about technology, as well as the obstacles to technology use in the classroom. To that end, the following research questions guided this work:

1. What are their perceptions of technology integration in the literacy classroom?
2. To what extents do K-12 teachers integrate technology within their literacy instruction?
3. What do they perceive as the obstacles to technology integration in the literacy classroom?

**Rationale**

Despite emphatic calls for technology integration in literacy and content-area classrooms (International Reading Association, 2009; Leu et al., 2004), it appears that a majority of teachers do not integrate technology within their literacy instruction (Hutchison & Reinking, 2011; Karchmer, 2001). To illustrate, Gray, Thomas, and Lewis (2010) found that although 96% of teachers reported access to Internet-connected computers, only 40% of those teachers routinely provided students with opportunities to use them. It appears that even fewer teachers use digital tools and technologies to support or enhance their literacy instruction. In a survey of 1,441 classroom teachers who were members of the International Reading Association, Hutchison & Reinking (2011) found that although 92% of respondents reported that they have access to Internet-connected computers, only 38% reported that they or their students used presentation tools regularly. Moreover, only 23% reported that they provided students with opportunities to use the Internet for research and fewer than 15% of teachers reported using technology for reading or writing activities. Interestingly, these teachers appear to recognize the importance of technology integration and report that they know how to use a variety of technologies in the classroom (Hutchison & Reinking, 2011). Perhaps not surprising, lack of time was cited as the greatest obstacle to technology integration in the literacy classroom.

**Methods**

**Participants**

Eighty-eight literacy educators participated in the survey, which was disseminated by email to the Massachusetts Reading Association membership of approximately 1,000 members. Survey respondents included classroom teachers, instructional specialists (i.e., Reading Specialist, Technology Specialist), and administrators teaching in K-12 schools at the time of the survey. Teaching experience ranged from three to thirty-nine years with a mean of 17.7 years. Although it can be can be inferred that this population is not a representative sample of all literacy educators, it may be conjecture that it is representative of MRA members working in K-12 schools at the time of the study.

**Data Collection and Analysis**
Data were collected with a modified version of *The Survey Of Technology Use In Literacy And Language Arts* developed by Hutchison & Reinking (2011; see Appendix). The survey measures teachers' self-reports regarding their integration, perceptions of, and obstacles to technology integration in the literacy classroom. It includes 5 items to collect descriptive data (i.e., MRA member, number of years teaching, role in school, grade level/s taught, and age), 75 Likert-scale items, 2 multiple-choice items, and one open-ended question. Respondents accessed the anonymous survey in Survey Monkey; the link to the survey was sent to approximately 1,000 MRA members in two email blasts. The survey was available to respondents for a two-week window in March, 2014.

In all, eighty-eight teachers and instructional specialists responded to the survey. Of these, sixty-five respondents completed the entire survey. At the conclusion of data collection, the survey was closed. Descriptive statistics and means were calculated for the survey items to identify trends across the data.

**Findings**

**What are their perceptions of technology integration in the literacy classroom?**

Although most respondents are not digital natives as described by Prensky (2005), it is striking to note that a majority feel confident when it comes to technology use. That is, 92.6% reported that they were skilled technology users to a large (25.37%) or moderate (50.75%) extent. Moreover, most perceived themselves to have adequate skills to integrate technology within literacy instruction, with 86.3% reporting that they feel prepared to teach students to read online to a moderate (52.94%) or large extent (39.35%; see Table 1).

**Table 1: To what extent do you feel prepared to teach students the skills they need for reading online?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Small Extent</th>
<th>Moderate Extent</th>
<th>Large Extent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.94%</td>
<td>11.76%</td>
<td>52.94%</td>
<td>32.35%</td>
<td>0</td>
</tr>
</tbody>
</table>

*N=67*

Not only did participants report confidence in their abilities to teach reading online, data analysis revealed that a majority of respondents perceived online reading to be important to a large (52.9%) or moderate (35.3%) extent (see Table 2). In contrast, it appears that for most respondents, technology is viewed as supplemental (49.2%) rather than important (40%) to instruction in the English Language Arts classroom. Their perceptions were reflected in their perceptions of the benefits to students; respondents reported that students benefit from technology integration to a large (47.7%) or moderate (32.3%) extent.

**Table 2: Perceived Importance of ICT Activities**

<table>
<thead>
<tr>
<th>ICT Task</th>
<th>Not at all</th>
<th>Small Extent</th>
<th>Moderate</th>
<th>Large</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activity</td>
<td>Extent 1</td>
<td>Extent 2</td>
<td>Extent 3</td>
<td>Extent 4</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>-----------</td>
<td>-----------</td>
<td>-----------</td>
<td>----------</td>
<td></td>
</tr>
<tr>
<td>Creating a Word Document</td>
<td>13.2%</td>
<td>16.2%</td>
<td>26.5%</td>
<td>42.8%</td>
<td></td>
</tr>
<tr>
<td>Sending Email</td>
<td>35.8%</td>
<td>23.9%</td>
<td>17.9%</td>
<td>19.4%</td>
<td></td>
</tr>
<tr>
<td>Playing educational games on a CD-ROM</td>
<td>27.9%</td>
<td>44.1%</td>
<td>16.2%</td>
<td>10.3%</td>
<td></td>
</tr>
<tr>
<td>Playing educational games online</td>
<td>5.9%</td>
<td>41.2%</td>
<td>27.9%</td>
<td>23.5%</td>
<td></td>
</tr>
<tr>
<td>Gathering pictures online</td>
<td>9.0%</td>
<td>29.9%</td>
<td>26.9%</td>
<td>32.8%</td>
<td></td>
</tr>
<tr>
<td>Reading a book or story online</td>
<td>2.9%</td>
<td>7.4%</td>
<td>35.3%</td>
<td>52.9%</td>
<td></td>
</tr>
<tr>
<td>Creating a multimedia presentation</td>
<td>14.7%</td>
<td>14.7%</td>
<td>30.9%</td>
<td>38.2%</td>
<td></td>
</tr>
<tr>
<td>Using reference sites online</td>
<td>4.4%</td>
<td>16.2%</td>
<td>30.9%</td>
<td>47.1%</td>
<td></td>
</tr>
<tr>
<td>Publishing information on a wiki or blog</td>
<td>25.0%</td>
<td>23.5%</td>
<td>30.9%</td>
<td>19.1%</td>
<td></td>
</tr>
<tr>
<td>Publishing information on a Website</td>
<td>25.4%</td>
<td>17.9%</td>
<td>35.8%</td>
<td>19.4%</td>
<td></td>
</tr>
<tr>
<td>Communicating using social networking</td>
<td>57.4%</td>
<td>22.1%</td>
<td>11.8%</td>
<td>7.4%</td>
<td></td>
</tr>
<tr>
<td>Formulating questions to research online</td>
<td>13.2%</td>
<td>13.2%</td>
<td>38.2%</td>
<td>33.8%</td>
<td></td>
</tr>
<tr>
<td>Locating information</td>
<td>7.4%</td>
<td>14.7%</td>
<td>29.4%</td>
<td>47.1%</td>
<td></td>
</tr>
</tbody>
</table>
To what extent do K-12 teachers integrate technology within their literacy instruction?

Similar to Hutchison and Reinking (2011), we found that although teachers feel confident about their abilities to integrate technology and perceive it to be important or supplemental to literacy instruction, their reported levels of technology integration was quite low (see Table 3). A majority report regular technology use during instruction; 76.1% of teachers use technology at least once per week during their literacy instruction.

It appears that students have relatively few opportunities to use technology despite teachers’ reports that technology integration is important (see Table 3). For example, although 42.8% of respondents indicated their perception that creation of Word documents is, to a large extent, an important ICT task, only 24.7% reported a similarly strong response to a probe about students’ opportunities to create Word documents in the English Language Arts classroom. In striking contrast to teachers reported skills and perceptions about the importance on online reading, only 26% reported that students have regular opportunities read a story or book online.

Table 2: Students’ ICT Use

<table>
<thead>
<tr>
<th>ICT Task</th>
<th>Not at all</th>
<th>Small Extent</th>
<th>Moderate Extent</th>
<th>Large Extent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluating information online</td>
<td>11.8%</td>
<td>13.2%</td>
<td>29.4%</td>
<td>44.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Synthesizing information online</td>
<td>12.1%</td>
<td>12.1%</td>
<td>31.8%</td>
<td>42.4%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Searching for information online</td>
<td>11.9%</td>
<td>10.4%</td>
<td>25.4%</td>
<td>50.7%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Using specific search strategies to search for information online</td>
<td>13.4%</td>
<td>13.4%</td>
<td>25.4%</td>
<td>46.3%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Collaborating online with students from other classes</td>
<td>16.2%</td>
<td>25.0%</td>
<td>35.3%</td>
<td>22.1%</td>
<td>1.5%</td>
</tr>
<tr>
<td>Activity</td>
<td>Percentage</td>
<td>Second</td>
<td>Third</td>
<td>Fourth</td>
<td>Fifth</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>------------</td>
<td>--------</td>
<td>-------</td>
<td>--------</td>
<td>-------</td>
</tr>
<tr>
<td>Creating a Word Document</td>
<td>31.5%</td>
<td>24.7%</td>
<td>15.1%</td>
<td>24.7%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Sending Email</td>
<td>69.9%</td>
<td>9.6%</td>
<td>4.1%</td>
<td>9.6%</td>
<td>6.8%</td>
</tr>
<tr>
<td>Playing educational games on a CD-ROM</td>
<td>55.6%</td>
<td>22.2%</td>
<td>13.9%</td>
<td>4.2%</td>
<td>4.2%</td>
</tr>
<tr>
<td>Playing educational games online</td>
<td>27.8%</td>
<td>29.2%</td>
<td>27.8%</td>
<td>12.5%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Gathering pictures online</td>
<td>20.5%</td>
<td>37.0%</td>
<td>20.5%</td>
<td>19.2%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Reading a book or story online</td>
<td>15.1%</td>
<td>24.7%</td>
<td>32.9%</td>
<td>26.0%</td>
<td>1.4%</td>
</tr>
<tr>
<td>Creating a multimedia presentation</td>
<td>38.4%</td>
<td>26.0%</td>
<td>16.4%</td>
<td>16.4%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Using reference sites online</td>
<td>20.5%</td>
<td>34.2%</td>
<td>21.9%</td>
<td>20.5%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Publishing information on a wiki or blog</td>
<td>65.3%</td>
<td>13.9%</td>
<td>12.5%</td>
<td>5.6%</td>
<td>2.8%</td>
</tr>
<tr>
<td>Publishing information on a Website</td>
<td>68.5%</td>
<td>12.3%</td>
<td>9.6%</td>
<td>5.5%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Communicating using social networking</td>
<td>84.9%</td>
<td>1.4%</td>
<td>5.5%</td>
<td>4.1%</td>
<td>4.1%</td>
</tr>
<tr>
<td>Formulating questions to research online</td>
<td>39.7%</td>
<td>27.4%</td>
<td>20.5%</td>
<td>9.6%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Locating information online</td>
<td>15.1%</td>
<td>32.9%</td>
<td>30.1%</td>
<td>20.5%</td>
<td>1.4%</td>
</tr>
</tbody>
</table>
Examining Perceptions About Technology Integration

What do they perceive as the obstacles to technology integration in the literacy classroom?

Similar to reports by Hutchison and Reinking (2011) and other research (e.g., Gray et al., 2010), access to technology does not appear to be a major obstacle to technology integration for the literacy educators who participated in this survey (see Table 4). In fact, 87.7% reported access to an Internet-connected computer in their classroom and 67.7% reporting availability of a laptop computer for personal use. Surprising to use, 32.3% of respondents did report that access to technology was an obstacle to technology integration to a large extent, surprising given nearly universal reports of access to multiple types of technology. Lack of funding was also perceived to be a major obstacle. It is important to note that although most respondents reported lack of time as an obstacle to integration to a moderate (29.2%) or a large (21.5%) extent, comparatively few teachers reported lack of administrative support.

Table 3: Reported Obstacles to Integration

<table>
<thead>
<tr>
<th>Perceived Obstacle</th>
<th>Not at all</th>
<th>Small Extent</th>
<th>Moderate Extent</th>
<th>Large Extent</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lack of access</td>
<td>16.9%</td>
<td>33.8%</td>
<td>16.9%</td>
<td>32.3%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>
Lack of incentives | 50.9% | 24.6% | 16.9% | 7.7% | 0.0%
Lack of time | 21.5% | 27.7% | 29.2% | 21.5% | 0.0%
Lack of tech support | 24.6% | 29.2% | 23.1% | 23.1% | 0.0%
Lack of professional development | 29.2% | 26.2% | 16.9% | 27.7% | 0.0%
Lack of funding | 16.9% | 30.8% | 13.8% | 36.8% | 1.5%
Lack of support from administrators | 53.8% | 10.8% | 16.9% | 16.9% | 1.5%

**Discussion**

The purpose of this study was to examine literacy teachers’ perceptions about, integration of, and obstacles to technology integration. Two important findings emerged from this research. First, although literacy teachers feel confident about their abilities to integrate technology and perceive technology integration in the ELA classroom as important, low levels of integration were reported. This was not surprising when one considers low levels of technology integration reported in the literature (e.g., Hutchison & Reinking, 2011).

In addition, teachers reported that there are multiple obstacles to technology integration. Among these, lack of funding emerged as the greatest obstacle. Previous research has found that teachers report many obstacles to technology integration, with access being just one of these (e.g., Lawless & Pellegrino, 2007). We suggest that although a majority of respondents reported access to technology, perhaps these technologies are poorly maintained, outdated, or insufficient for the demands of the 21st century classroom. More research is needed to determine if and how obstacles to technology integration in the literacy classroom prevent teachers from using available tools in their instruction.

**Conclusion**

Evidence suggests that literacy teachers, whether digital natives (Prensky, 2005) who have just entered the classroom or proficient literacy teachers with years of experience, struggle to integrate technology (Hutchison & Reinking, 2011; Lawless & Pellegrino, 2007). Therefore, thoughtful examination of how best to support teachers in the integration of ICT is needed. This is especially important when one considers that it is the teacher who determines the extents to which technology is used in the classroom (Ertmer
& Ottenbreight-Leftwich, 2010). More research is needed in order to discover how best to support teachers as they discover how to use technology effectively in the literacy classroom.
References


Appendix: SURVEY OF TECHNOLOGY USE IN LITERACY AND LANGUAGE ARTS

Directions: For all Likert-type and multiple-choice items, please click on your responses. Please add your description information (e.g., number of years teaching) and comments to the open-ended question at the end of the survey.

1. During the previous school year, about how often did you use technology as part of literacy instruction? (e.g. the Internet, creating multimedia presentations, sending email, etc.)
   - Not at all
   - A few times per year
   - 2-3 times a month
   - About once per week
   - Daily

2. During the previous school year, about how often did your students use technology as part of literacy instruction? (e.g. the Internet, creating multimedia presentations, sending email, etc.)
   - Not at all
   - A few times per year
   - 2-3 times a month
   - About once per week
   - Daily

3. To what extent do you present students in your typical reading or language arts class with online work that involves using computers or the Internet in the following ways?

   Rate your response to the question for each item below using the following scale:
   - Not at all
   - Small extent
   - Moderate extent
   - Large extent
   - NA

   a. Creating a Word document
   b. Sending email
   c. Playing educational games on a CD-ROM
   d. Playing educational games online
   e. Gathering pictures online
   f. Reading a book or story online
   g. Creating a multimedia presentation (Ex. PowerPoint)
   h. Using reference sites online (Ex. dictionary.com)
   i. Publishing information on a wiki or blog
   j. Publishing information on a Website
   k. Communicating using social networking such as Facebook
4. To what extent do you present students in your typical reading or language arts class with online work that involved using computers or the Internet in the following ways?

Rate your response to the question for each item below using the following scale:

- Not at all
- Small extent
- Moderate extent
- Large extent
- NA

1. Formulating questions to research online
m. Locating information online
n. Evaluating information online
o. Synthesizing information online
p. Searching for information online
q. Using specific search strategies to search for information online
r. Collaborating online with students from other classes

5. To what extent do you feel the following activities would be IMPORTANT to your literacy instruction, assuming they were available?

Rate your response to the question for each item below using the following scale:

- Not at all
- Small extent
- Moderate extent
- Large extent
- NA

a. Creating a Word document
b. Sending email
c. Playing educational games on a CD-ROM
d. Playing educational games online
e. Gathering pictures online
f. Reading a book or story online
g. Creating a multimedia presentation (Ex. PowerPoint)
h. Using reference sites online (Ex. dictionary.com)
i. Publishing information on a wiki or blog
j. Publishing information on a Website
k. Communicating using social networking such as Facebook
6. To what extent do you feel the following activities would be IMPORTANT to your literacy instruction, assuming they were available?

Rate your response to the question for each item below using the following scale:

Not at all Small extent Moderate extent Large extent NA

1. Formulating questions to research online
m. Locating information online
n. Evaluating information online
o. Synthesizing information online
p. Searching for information online
q. Using specific search strategies to search for information online
r. Collaborating online with students from other classes

7. To what extent do you feel prepared to teach students the skills they need for reading online?

Not at all Small extent Moderate extent Large extent NA

8. To what extent are you skilled at using digital technology for instruction?

Not at all Small extent Moderate extent Large extent NA

9. To what extent are you skilled at using digital technology in general? (computers, cell phones, iPods, etc.)

Not at all Small extent Moderate extent Large extent NA

10. To what extent would you like to increase your integration of technology into your literacy or language arts instruction?

Not at all Small extent Moderate extent Large extent NA

11. Please indicate the extent to which you believe the following are OBSTACLES to integrating technology into your literacy/language arts instruction:

Rate your response to the question for each item below using the following scale:
<table>
<thead>
<tr>
<th>Not at all</th>
<th>Small extent</th>
<th>Moderate extent</th>
<th>Large extent</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. I don't think technology is reliable.</td>
<td>b. I don't know how to incorporate technology and still teach content standards.</td>
<td>c. I don’t know how to use technology.</td>
<td>d. I don’t understand how to integrate technology into my literacy instruction.</td>
<td>e. I don’t think technology fits my beliefs about student learning.</td>
</tr>
</tbody>
</table>

12. Please indicate the extent to which you believe the following are OBSTACLES to integrating technology into your literacy/language arts instruction:

Rate your response to the question for each item below using the following scale:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Small extent</th>
<th>Moderate extent</th>
<th>Large extent</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>i. I think Internet text is too difficult for students to read.</td>
<td>j. I don't understand copyright issues.</td>
<td>k. I have difficulty controlling what information students access online.</td>
<td>l. I don’t know how to evaluate or assess students when they work online.</td>
<td>m. I don't have time to teach students the basic computer skills needed for more complex tasks.</td>
</tr>
</tbody>
</table>

13. Please indicate the extent to which you believe the following are OBSTACLES to integrating technology into your literacy/language arts instruction:

Rate your response to the question for each item below using the following scale:

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Small extent</th>
<th>Moderate extent</th>
<th>Large extent</th>
<th>NA</th>
</tr>
</thead>
<tbody>
<tr>
<td>p. Lack of access to technology</td>
<td>q. Lack of incentives to use technology</td>
<td>r. Lack of time during a class period</td>
<td>s. Lack of technical support</td>
<td>t. Lack of professional development on how to integrate technology</td>
</tr>
</tbody>
</table>
u. Lack of funding  
v. Lack of support from administrators

14. What types of technology are available to you at school? (Check all that apply)

   a. Internet-connected computer(s) in my classroom (Indicate #)  
   b. Internet-connected computer(s) elsewhere in the school (Indicate #)  
   c. A laptop computer for personal use  
   d. Laptop computers for each student (Indicate #)  
   e. A digital projector  
   f. An interactive whiteboard  
   g. Student email  
   h. Digital video recording equipment  
   i. Digital camera  
   j. A document camera  
   k. An iPod  
   l. iPad or tablet

Additional technology available to you:

15. What kind of technology support is available to you? (Check all that apply)

   a. in-school technology coordinator (for instructional support)  
   b. in-school technology coordinator (for technical support)  
   c. district technology coordinator (for instructional support)  
   d. district technology coordinator (for technical support)  
   e. administrative support (for obtaining resources, professional development, etc.)  
   f. library/media specialist  
   g. Another teacher who assists with technology  
   h. No assistance is provided

Other types of support:

16. Choose the statement below that best describes how you view technology as it relates to language arts instruction.

   Important to instruction    Supplemental to instruction    Central to instruction    Not sure

17. To what extent do you feel that students benefit when they use digital technologies such as the Internet to learn in your classroom?

   Not at all    A few times per year    2-3 times a month    About once per week    Daily
18. Are you a member of MRA?

19. How many years have you been a teacher?

20. What is your role in your school or district?

21. What grade/s do you teach?

22. What is your age?

23. Is there anything else you’d like to share related to technology integration in the literacy classroom?